

1
§ layers 20,20 on opposite sides of the core layer 10. Semiconductor chip 50 is provided on a semiconductor supporting substrate (not shown). Lead 60, including wiring 40, is electrically connected to external connecting terminal 80 and electrode 100 of chip 50. External connecting terminal 80 is electrically connected to lead 60 via a hole in polyimide film 30. Sealing material 70 covers lead 60.--

Please delete the paragraph on page 8, lines 6-18, from the Amendment filed April 15, 2002, and substitute therefor the following new paragraph:

§ --The process can be divided into three representative sections. The first one, including STEPS 1-5 (2-a), is a method for fabricating a semiconductor element comprising (1) the step 1 of applying an adhesive film 2.2 to the tape 2.1 having a pattern layer and a wire 2.1.2 to the tape 2.1, (2) the step 2 of adhering the tape 2.1 having a pattern layer to the semiconductor element 2.3 having the pad 2.6 by means of the adhesive film 2.2 while maintaining an insulating condition therebetween, (3) the step 3 of electrically connecting the pattern layer formed on the tape 2.1 and the pad 2.6 on the semiconductor element 2.3, via connecting lead 2.1.1', formed from wire 2.1.1, (4) the step 4 of sealing the electrically connected portion with an insulating agent (e.g., mold resin) 2.4, and (5) the step 5 of forming an external terminal 2.5 on the tape for connection to the mounting substrate.--

Please delete the paragraph bridging pages 8 and 9, from the Amendment filed April 15, 2002, and substitute therefor the following new paragraph:

§3
--The second one, including STEPS 6-10 (2-b), is a method for fabricating a semiconductor element comprising (1) the step 6 of applying an adhesive film 2.2 to the semiconductor element 2.3 having pad 2.6, (2) the step 7 of adhering the tape 2.1 having a pattern layer to the semiconductor element 2.3 by means of the adhesive film 2.2 while maintaining an insulating condition therebetween, and adhering wire 2.1.1 to tape 2.1, (3) the step 8 of electrically connecting the pattern layer formed on the tape 2.1 and the pad 2.6 on the semiconductor element 2.3 via connecting lead 2.1.1', formed from wire 2.1.1, (4) the step 9 of sealing the electrically connected portion with an insulating agent 2.4, and (5) the step 10 of forming an external terminal 2.5 on the tape 2.1 for connection to the mounting substrate.--

Please delete the paragraph on page 9, lines 12-23, from the Amendment filed April 15, 2002, and substitute therefor the following new paragraph:

§4
--The third one, including STEPS 11-14 (2-c), is a method of fabricating a semiconductor element comprising (1) the step 11 of setting the tape 2.1 having the pattern layer in registration and adhering the tape 2.1 to the semiconductor element 2.3 having pad 2.6, using the adhesive film 2.2 simultaneously with maintaining an insulating condition therebetween; and adhering wire 2.1.1 to tape 2.1 (2) the step 12 of electrically connecting the pattern layer formed on the tape 2.1 and the pad 2.6 on the semiconductor element 2.3 via connecting lead 2.1.1', formed from wire 2.1.1, (3) the step 13 of sealing the electrically connected portion with an insulating agent 2.4, and (4) the step 14 of forming an external terminal 2.5 on the tape 2.1 for

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connection to the mounting substrate.--

Please delete the paragraph bridging pages 11 and 12, from the Amendment filed April 15, 2002, and substitute therefor the following new paragraph:

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--Fig. 4 shows an example of the composition of a circuit tape to which an adhesive film is attached. The circuit tape 4.1 can be adhered to the semiconductor element 4.3. If a thermosetting resin is used for the adhesive layer 4.2 at the circuit tape side and a thermoplastic resin is used for the adhesive layer (not shown in Fig. 4) at the side adhered to the semiconductor element, the circuit tape having the adhesive ability shown in Fig. 4 can be provided readily. Wire 4.1.1 is electrically connected to circuit tape 4.1.--

Please delete the paragraph bridging pages 20 and 21, and substitute therefor the following new paragraph:

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--An epoxy group adhesive film 6.2 (see Fig. 6-1) (made by Hitachi Chemical Co., Ltd., AS 3000, 50 μm thick) was registered, placed, and adhered between a semiconductor element 6.3 and circuit tape 6.1 at 170°C for one minute with a pressure of 50 kgf/cm², and was then post-cured at 180°C for 60 minutes in a constant temperature bath. Subsequently, connecting leads on the circuit tape were electrically connected to pads of the semiconductor element by single point bonding. The connecting portion was encapsulated with an epoxy encapsulant 6.4 (made by Hitachi Chemical Co., Ltd., RC021C). Finally, the semiconductor device shown in

Fig. 6-1 was obtained by fixing the solder balls, which were connecting terminals 6.5 with the mounting substrate, onto the circuit tape 6.1.--

Please delete the paragraph bridging pages 21 and 22, and substitute therefor the following new paragraph:

--A film material 6.2 (see Fig. 6-2) having a three layer structure was obtained by applying an adhesive agent (made by Hitachi Chemical Co. Ltd., DF335), composed of a die bonding film material, onto both surfaces of a polyimide film (made by Ube Kosan Co., Ltd., SGA, 50 μm thick) to a thickness of 50 μm . The obtained film material 6.2 was registered and adhered to circuit tape 6.1 at 170°C for five seconds with a pressure of 30 kgf/cm^2 . Under the above conditions, the unadhered adhesive layer exhibited a sufficient adhesive force to adhere to the semiconductor element 6.3. The circuit tape attached with the film material was adhered to the semiconductor element at 200°C for one minute with a pressure of 30 kgf/cm^2 , and was then post-cured at 200°C for 60 minutes in a constant temperature bath. Subsequently, connecting leads on the circuit tape 6.1 were electrically connected to pads of the semiconductor element by gang bonding. The connecting portion was encapsulated with an epoxy encapsulant 6.4 (made by Hitachi Chemical Co., Ltd., RC021C). Finally, the semiconductor device shown in Fig. 6-2 was obtained by fixing the solder balls, which served as connecting terminals 6.5 with the mounting substrate, onto the circuit tape 6.1. Also shown in Fig. 6-2 is outer frame 6.6.--

Please delete the paragraph bridging pages 22 and 23, and substitute therefor the following new paragraph:

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--A low elastic adhesive film 6.2 composed of an epoxy resin and acrylic rubber (made by Hitachi Chemical Co. Ltd., trial product, 150 μm thick) was registered, placed, and adhered between the semiconductor element 6.3 and the circuit tape 6.1 at 180°C for 30 seconds with a pressure of 100 kgf/cm^2 , and was then post-cured at 180°C for 60 minutes in a constant temperature bath. Subsequently, connecting leads on the circuit tape were electrically connected to pads of the semiconductor element by wire bonding. The connecting portion was encapsulated with a silicone encapsulant 6.4 (made by Toshiba Silicone Co., Ltd., TSJ 3150). Finally, the semiconductor device shown in Fig. 6-3 was obtained by fixing the solder balls, which served as connecting terminals 6.5 with the mounting substrate, onto the circuit tape 6.1. Also shown in Fig. 6-3 is outer frame 6.6.--